

REMARKS

Claims 1-17, 25, 44, and 48-52 are under current examination (currently restricted to species A, C, H and S of record), claims 18-24, 26-43, and 45-47 having been withdrawn by the Examiner as being drawn to non-elected species.

Applicants hereby submit a Request for Continued Examination (RCE).

Applicants thank the Examiner for withdrawal of the objections to claims 3-6 based on informalities, for withdrawal of the rejection of claims 1-17, 25, 44, and 48-52 under 35 U.S.C. § 112 ¶2 in response to Applicants' amendments and arguments, for withdrawal of the rejection of claims 1-4, 6-10, and 48 under 35 U.S.C. § 102(b) as being allegedly anticipated by Janousek et al., for withdrawal of the rejections of claims under 35 U.S.C. § 103(a) as being allegedly obvious in view of Janousek et al. (*Molecular and General Genetics*, 250:483-490, 1996) and variously in further view of Curtis et al., and Spotorno et al.

Applicants additionally thank the Examiner for indicating that claims 12-17, 25, 44, and 51 are allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Applicants acknowledge the Examiner's objection to claim 2 in view of the 'double parentheses' enclosing the status identifier. Applicants have amended the status identifier to obviate this rejection.

Applicants acknowledge the Examiner's rejection of claims 1-10 and 48, under 35 U.S.C. § 102(b) as being allegedly anticipated by Tornaletti et al. (*Oncogene*, 10:1493-1499, 1995). Applicants traverse this rejection because Tornaletti et al., do not *inter alia* teach step i) (prior step h)), and in any event Applicants have amended independent claim 1 to render this rejection moot.

Applicants acknowledge the Examiner's rejection of claims 1, 2, 10-11, 49-50, and 52 under 35 U.S.C. § 103(a) as being allegedly obvious over Tornaletti et al., in view of Gaasterland et al. (*Nature Genetics*, 24:204-206, March 2000). Applicants respectfully traverse this rejection, and in any event the current amendments to claim 1 render this rejection moot.

Applicants acknowledge the Examiner's provisional rejection of claims 1-2, 6-7, 11-17, 44, and 48-50, under the doctrine of nonstatutory obviousness-type double patenting, over claims 1-2, 4-5, 9-15, 38, and 42-44 respectively of co-pending application 10/106,269.

No new matter has been added.

Formalities

The Examiner's objected to claim 2 in view of the 'double parentheses' enclosing the status identifier. Applicants have amended the status identifier to obviate this rejection.

For the record, Applicants disagree with the finality of the Examiner's Office Action because contrary to the Examiner's urging, it is difficult to understand how Applicants' amendments did necessitated the new grounds of rejection (i.e., the assertion of Tornaletti et al., and Gaasterland et al.), where Applicant's only substantive amendment was to introduce the word "mammalian into claim 1. It appears rather that Applicants' rebuttal of the initially asserted art was successful and that the Examiner elected to assert additional art that could have been earlier asserted. In other words, there is no apparent nexus between Applicants' amendments and the necessity of a new ground of rejection. Applicants have nonetheless hereby submitted a Request for Continued Examination (RCE).

Claim Objections

The Examiner has objected to claims 3-6 as lacking appropriate 'colon' indicator for lists. Applicants have responsively amended these claims to obviate this rejection, and respectfully request withdrawal of this objection.

Rejection under 35 U.S.C. § 102

The Examiner has rejected claims 1-10 and 48, under 35 U.S.C. § 102(b) as being allegedly anticipated by Tornaletti et al. (*Oncogene*, 10:1493-1499, 1995).

Applicants traverse this rejection because Tornaletti et al., do not *inter alia* teach step i) (prior step h)). In any event, the present amendments to claim 1, render this rejection moot.

The Examiner has indicated that claims 12-17, 25, 44, and 51 are allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Applicants, as described herein above, have amended independent claim 1 to introduce the

limitations of claim 12. Specifically, in view of the limitations of claim 12 (now cancelled) claim 1 has been amended to recite new step e) selecting pairs of classes or pairs of unions of classes from the disjunct-phenotypic classes of interest, and new step J) performing epigenetically-based prediction of each pair of classes or pair of unions of classes using a machine learning classifier. Conforming amendments have been made to claims 1, 13, 48, and 49.

Applicants, therefore, respectfully request withdrawal of this anticipation rejection based on Tonraletti et al.

Rejections under 35 U.S.C. § 103

Janousek, in view of ***Curtis***:

The Examiner has rejected claims 1, 2, 10-11, 49-50, and 52, under 35 U.S.C. § 103(a) as being allegedly obvious over Tornaletti et al., in view of Gaasterland et al. (*Nature Genetics*, 24:204-206, March 2000).

Applicants respectfully traverse this rejection, because Tornaletti et al., alone or in combination with Gaasterland et al., do not teach or otherwise suggest the presently claimed subject matter. Gaasterland may teach SVMs, but they do so only in the context of recognizing new genes that are similar in expression pattern to groups of genes that are similar in expression pattern to groups of genes known to be co-regulated. Application of SVM premised on a known class ‘known to be co-regulated genes’ does not adequately teach application of SVM in the methylation context as presently claimed.

In any event, the present amendments to claim 1, render this rejection moot.

Applicants, therefore, respectfully request withdrawal of this obviousness rejection based on Tonraletti et al., in view of Gaasterland et al.

Nonstatutory Double Patenting Rejection

The Examiner has provisionally rejected claims 1-2, 6-7, 11-17, 44, and 48-50, under the doctrine of nonstatutory obviousness-type double patenting, over claims 1-2, 4-5, 9-15, 38, and

42-44 respectively of copending application 10/106,269.

Applicants respectfully traverse this rejection based on the current amendments to independent claim 1 as discussed above, and request withdrawal of this provisional double patenting rejection.

CONCLUSION

In view of the foregoing amendments and remarks, Applicant respectfully requests allowance of the amended claim set provided herein above. The Examiner is encouraged to phone Applicants' attorney, Barry L. Davison, to resolve any outstanding issues and expedite allowance of this application.

Respectfully submitted,

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